

REMARKS

Claims 1-12 stand rejected in the outstanding Official Action. Claims 1, 8 and 9 have been amended and claim 7 cancelled without prejudice. Therefore, claims 1-6 and 8-12 remain in this application.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

It is noted that the present application is a national phase entry of PCT Application No. PCT/GB00/03165. Applicants note that this application has been accepted by the U.S. PTO PCT Office and respectfully requests the Examiner to acknowledge applicants' claim for priority by checking the appropriate box in the Office Action Summary Sheet. Specifically, the Examiner is requested to check the boxes labeled "Acknowledgement is made of a claim for foreign priority. . . , "All" and "received in this national stage application from the International Bureau." The early acknowledgement of applicants' claim for priority will avoid needless delay in the event a Notice of Allowance is submitted.

The Examiner's acknowledgement of receipt and consideration of the prior art submitted with applicants' Information Disclosure Statement is very much appreciated.

Claims 1, 2 and 7-12 stand rejected under 35 USC §102 as being anticipated by Thomas (U.S. Patent 3,609,116). The Examiner alleges that Thomas at column 7, lines 35-43, discloses machining the cured shim to a desired thickness.

Applicants' claim 1 comprises a sequence of steps in which shim material is positioned on the sub-structure, the shim material is then cured and the cured shim material is then machined to the desired thickness. Thomas at column 7, lines 35-43, discusses that shim material may be applied or injected in an uncured state. Separately, Thomas also suggests that any of the formulations of shim material utilized "may be machined, drilled or riveted" and "is resistant to all known lubricants, fuels, paints, salts and solvents and provides excellent adhesion to aluminum, titanium, steel and boron composites."

However, Thomas does not disclose the sequence of events recited in applicants' independent claim 1. He does not disclose positioning shim material on the sub-structure, curing that shim material and then machining that cured shim material. The discussion of machining, drilling or riveting the Thomas material is a reference to the structural characteristics of the material, whether or not it is in place, whether or not it has been positioned on the sub-structure. As a result, Thomas fails to anticipate applicants' claim 1 or claims 2 and 7-12 dependent thereon. Therefore, any further suggestion of anticipation is respectfully traversed.

Additionally, applicants' claim requires the final step of assembling an outer layer with the sub-structure such that the machined shim material lies substantially between the outer layer and the sub-structure. The Examiner, in the first four lines on page 3 of the Official Action, alleges that this is disclosed in Thomas at column 7, line 26. Line 26 refers to a "lap joint" in which the shim material is placed between two layers of material and then cured in place. This in fact teaches away from applicants' claimed series of

method steps in which the shim material is first positioned, then cured, then machined and then the assembly step takes place. Again, not only is applicants' sequence of steps not disclosed in the Thomas reference, Thomas specifically teaches away from applicants' claimed invention. For the above reasons, Thomas cannot anticipate the subject matter of applicants' claim 1 or claims dependent thereon.

Claims 1, 2, 5 and 6 stand rejected under 35 USC §102 as being anticipated by Applicants' admitted prior art (AAPA). The reference to the sentences bridging pages 1 and 2 of applicants' specification are indeed pertinent. It is noted that this portion of applicants' specification discloses a liquid adhesive material comprising a viscous liquid which must be applied to the sub-structure with a spatula. Exceeding care must be taken to avoid getting too much adhesive and for ensuring that the adhesive is only on the area needed. Only after this adhesive has cured can it be modified. Even then, tooling for use of the adhesive must be coated with a release agent and therefore must be thoroughly cleaned both before and after use. Even with such care, tooling deteriorates rapidly after a relatively low number of uses.

Applicants' claimed invention is the use of a film or sheet of preformed shim material so that the problems of the application of a viscous material are not encountered. Applicants have amended claim 1 to more clearly recite this unique characteristic of applicants' method. Moreover, the assembling step has been modified to clearly refer to the "machined shim material," which machining occurs in the previously recited step.

The admitted prior art contains no disclosure of the shim material comprising a film or sheet of preformed shim material and indeed teaches away from such method

step. Accordingly, applicants' claims 1, 2, 5 and 6 clearly distinguish over applicants' admitted prior art and any further rejection thereunder is respectfully traversed.

Claims 3 and 4 stand rejected as unpatentable over Thomas or Applicant's Admitted Prior Art (AAPA) under the provisions of 35 USC §103. Inasmuch as claims 3 and 4 dependent from claim 1, the above comments with respect to Thomas and the AAPA are herein incorporated by reference. In fact, as noted above, both Thomas and the AAPA teaches away from applicants' claimed combination of method steps. Neither Thomas nor the AAPA teach the positioning of a film or sheet of preformed shim material on the sub-structure, nor do they teach the sequence of machining the shim material and assembling the structure. Thomas merely teaches that shim material can be cured in the spaces between parts and that it is made of a material which "may be machined, drilled or riveted" but does not contain any suggestion of when such machining, drilling or riveting can take place.

Moreover, the AAPA teaches that the shim material is not a film or sheet of preformed shim material, but rather is a viscous adhesive which is applied with a spatula. This clearly fails to teach the positioning of a film or sheet of preformed sheet material.

The Examiner's admission that "Thomas and AAPA fail to teach curing the shim material by exposure of the shim material to ultra violet light or radio frequency radiation" is very much appreciated. Thus there is no disclosure in any reference that the shim material can be cured by exposure to ultraviolet light or radio frequency radiation as set out in claims 3 and 4. Specifically, the AAPA cures in apparent relation to the thickness of the viscous adhesive layer ("too much adhesive will result in a longer wait

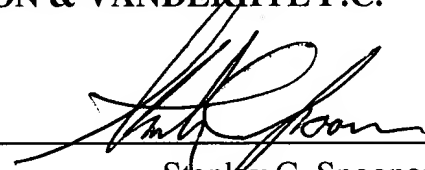
for curing and more time spent in machining the necessary." Applicants' specification, page 2, lines 12-13). Thus, the AAPA teaches away from applicants' claimed method steps. The Examiner's suggestion that "a simple room temperature cure of the type taught by Thomas or AAPA would provide equivalent results" is mere speculation on the Examiner's part and finds no support in any reference of record. As a result, the rejection of claims 3 and 4 under §103 is without support in the art of record and therefore respectfully traversed.

Having responded to all objections and rejections set out in the outstanding Official Action, it is submitted that remaining claims 1-6 and 8-12 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of these claims, he is respectfully requested to contact applicant's undersigned representative.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

Page 1, between the Title and line 1:

BACKGROUND OF THE INVENTION

1. Field of the Invention

Page 1, above the paragraph beginning at line 5:

2. Discussion of Prior Art

Page 2, above the paragraph beginning at line 25:

SUMMARY OF THE INVENTION

Page 5, above the paragraph beginning at line 3:

BRIEF DESCRIPTION OF THE DRAWINGS

Page 5, above the paragraph beginning at line 16:

DETAILED DISCUSSION OF EMBODIMENTS

IN THE CLAIMS

1. (*Amended*) A method of assembling a structure comprising at least the steps
of:

providing a sub-structure,

positioning shim material on at least part of the sub-structure, said shim material

comprising one of a film and sheet of preformed shim material,

curing the shim material disposed on the sub-structure,
machining the cured shim material to a desired thickness, and
assembling an outer layer with the sub-structure such that the machined shim
material lies substantially between the outer layer and the sub-structure.

8. (*Amended*) A method as claimed in claim [7] 1 wherein the film or sheet of
shim material is pre-cut into a shape suitable for direct use in a particular application
prior to the shim material being positioned on the sub-structure.

9. (*Amended*) A method as claimed in claim [7] 1 wherein the film or sheet of
shim material has a thickness in the range 0.4 to 4.0 mm.